

Keysight N4917A Optical Receiver Stress Test

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Getting Started
with the
Keysight N4917A
Optical Receiver Stress Test

You only need a few minutes to get started
with the N4917A Optical Receiver Stress Test software.

This Getting Started Brochure helps you to
quickly install the N4917A Optical Receiver Stress
Test software and connect the instruments.

If you need more detailed information on the
N4917A, refer to the Online Help.

Notice

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Safety Summary

General Safety Precautions

Refer to the safety instructions of the instruments used in the setup.

Naming Convention

From this point onwards, the instruments will be referred to by the following names:

- N4903A/B High Performance Serial **BERT**
- 86100C **DCA-J** or 86100D **DCA-X** as **DCA**
- 8163 A/B as **LMS frame**
- 8164 A/B as **LMS frame**

Installing the Keysight N4917A

Inspect Shipment

Check if the Keysight N4917A Optical Receiver Stress Test shipping container contains the following standard deliverables:

- a) Receiver Stress Test Conditioning Unit
- b) The CD with the software
- c) This Getting Started Guide

If the contents are incomplete, if there is mechanical damage, or if the instrument does not work within its specifications, notify the nearest Keysight office. The Keysight office will arrange for repair or replacement without awaiting settlement.

Installing the Keysight N4917A Optical Receiver Stress Test Software

The software can be installed on a computer fulfilling the minimum system requirements as defined below:

Minimum System Requirements:

- VGA (640 x 480)
- MS Windows® XP, SP2
- Internet Explorer
- Keysight N490X IVI-COM Driver 1.2
www.keysight.com/find/jbert
- Keysight IO Libraries Suite rev. 15.5 or later
www.keysight.com/find/iosuite

We recommend to install N4917A software on a separate PC.

To install the software, double-click on setup.exe and follow the instructions.
For the latest Software Revision, go to www.keysight.com/find/optical_stress.

NOTE: Please remove all previous versions of the Keysight N4917A Optical Receiver Stress Test software before installation. Ensure that all drivers and IO Library should be installed before installing N4917A software.

Installing the Keysight N4917A

Check the Software Status of the J-BERT, the DCA, and the LMS frames.

- 1** You may wish to connect a keyboard and mouse to your J-BERT and/or DCA. This is not mandatory but convenient and should be done when the instrument is switched off.
- 2** Switch on the J-BERT, DCA and LMS frames or stand-alone attenuator.
- 3** On the J-BERT, open the *Help* menu and click *About*.

The N4903B software revision must be 7.20 or later. If it is lower, you need to update the software. For details refer to the User Guide.
- 4** On the DCA, open the *Help* menu and click *About*.

For 86100C, the software revision must be 10.01 or later. If it is lower, you need to update the software. For details refer to the User Guide.

For 86100D, the software revision must be 10.70 or later.
- 5** On the LMS frame, press the Config button and select 'About Mainframe'.

The software revision must be 5.25 or later. If it is lower, you need to update the software. For details refer to the User Guide.

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Establish the GPIB Connection

- 1 Connect the J-BERT, DCA, attenuator, and the LMS frame to the GPIB.

NOTES:

Make sure to connect the instruments sequentially.
Do not create branches in the cabling of the GPIB.

- 2 Inspect the *Keysight IO Control* icon in the Windows task bar.

If you see this icon,
the revision of the Keysight
IO Libraries Suite is M.01.



You can use
IO Config for
configuring
the N4917A.

If you see one of these icons,
the revision of the Keysight
IO Libraries Suite is 15.5
or later.



You can use the *Keysight Connection Expert* which
makes it easy to configure
USB instruments.

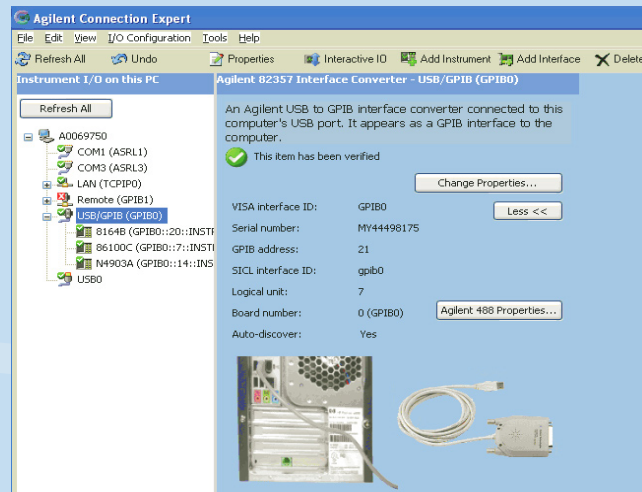
NOTE: Please refer to Page
6 for more information on
Keysight IO control icon.

Installing the Keysight N4917A

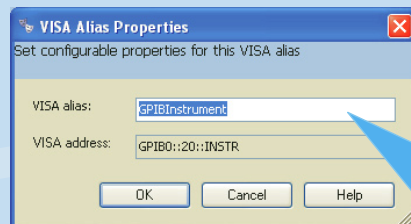
Assign VISA Alias Names to the Instruments of the N4917A setup

The use of Alias names is recommended, but not mandatory.

- 1 Click the *Keysight IO Control* icon in the Windows task bar and start the Keysight Connection Expert from the menu.



- 2 Right-click on the instrument in the left side panel, and select 'Add VISA alias'.

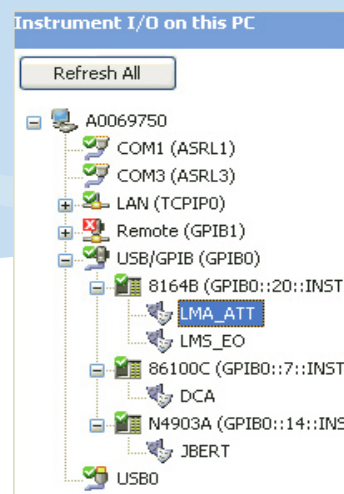


Use the following alias names:

- a) J-BERT : JBERT
- b) DCA-J or DCA-X : DCA
- c) LMS Frame with E/O module : LMS_EO
- d) LMS Frame with Attenuator module or N77 Series Attenuator : LMS_ATT

NOTE: Type the new VISA alias name here.

- 3 When done, the *Keysight Connection Expert* shows a window like this:



Installing the Keysight N4917A

First Steps using the N4917A

1 Start the N4917A Optical Receiver Stress Test software.



2 Click **Find/Check** to find the instruments.

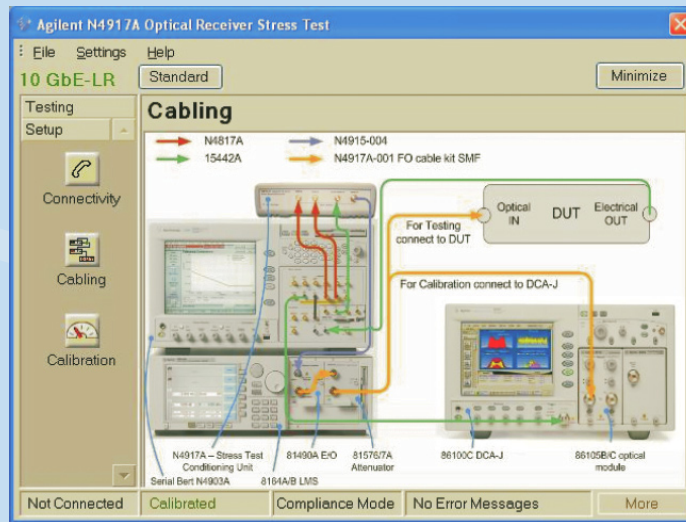
3 Select the instruments used in your setup and verify the connection strings.

If you have setup the VISA alias names as described on Page 6 of this document, then the correct names will automatically appear upon selecting the instrument.

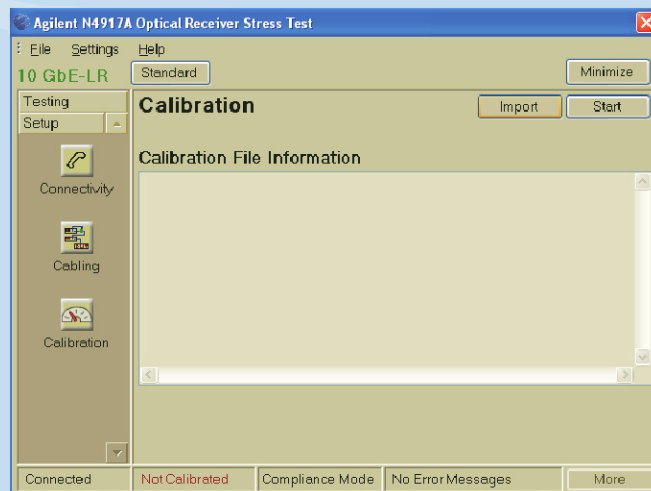


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- 4 From the list menu given on the left side, press **Cabling** for support on the signal path connection.



- 5 The setup has to be calibrated before any testing can be done. Select Calibration from the list menu given on the left side of the window. Click 'Start' to perform calibration.



NOTES:

- For calibration, all instruments are mandatory.
- For testing, all instruments except the DCA are mandatory.
- The DCA optical plug-in module has to be always inserted in slots 1 & 2 of the DCA mainframe.
- For calibration and testing of the 10 GbE- and 10 GFC- standards, use the recommended N4871A matched cable pair and the N4915A-004 2.4 mm cable to reduce ISI effects.
- For calibration and testing of the 8 GFC- standard use the 15442A four SMA cables to generate sufficient ISI induced eye closure.
- N4917A software can run on OS Windows 7 (32 bit only).
- For more information, refer to the Online Help available on the software.

This information is subject to change without notice.

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